

IN THE TITLE OF THE INVENTION:

Please delete the present Title of the Invention in its entirety, and substitute the following new Title of the Invention as follows:

-- LIQUID CRYSTAL DISPLAY DEVICE INCORPORATING  
PHASE DIFFERENCE PLATE AND LIQUID CRYSTAL LAYER  
CAPABLE OF IMPROVING VIEWING ANGLE DEPENDENCE --.

IN THE CLAIMS:

**Please amend Claims 1 and 15 as follows:**

1. (Twice Amended) A liquid crystal display device, comprising:
- a liquid crystal display element including:
    - a pair of [light-transmitting] substrates [each including a transparent electrode layer and an alignment layer on the surface thereof facing the other]; and
  - a liquid crystal layer sandwiched by the [light-transmitting] substrates and constituted by a liquid crystal material of which the refractive index anisotropy is specified to vary with wavelengths of rays of light within a range that allows no viewing-angle dependent coloration to occur to an image displayed on the liquid crystal display element;
  - a pair of polarizers disposed so as to sandwich the liquid crystal display element; and
  - at least one phase difference plate disposed between the liquid crystal display element and the pair of polarizers,

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wherein the phase difference plate has three principal refractive indices  $n_a$ ,  $n_b$ , and  $n_c$  being mutually related by the inequality  $n_a < n_b < n_c$ , and the principal refractive index  $n_b$  inclines to the normal to a surface of the phase difference plate.

15. (Amended) A liquid crystal display device, comprising:

a liquid crystal display element including:

a pair of [light transmitting] substrates [each including a transparent electrode layer and an alignment layer on the surface thereof facing each other]; and

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a liquid crystal layer sandwiched by the [light transmitting] substrates and constituted by a liquid crystal material of which the refractive index of anisotropy is specified to vary with wavelengths of rays of light within a range that allows no viewing-angle dependent coloration to occur on a liquid crystal screen;

a pair of polarizers disposed so as to sandwich the liquid crystal display element; and

at least one phase difference plate disposed between the liquid crystal display element and the pair of polarizers,

wherein the phase difference plate has three principal refractive indices  $n_a$ ,  $n_b$  and  $n_c$  being such that  $n_a = n_c > n_b$ , and the principal refractive indices  $n_a$  and  $n_c$  being parallel to the surface of the phase difference plate, the principal refractive index  $n_b$  being parallel to the normal to the surface.

**Pl as add new claims 31 - 47 as follows:**

31. (New Claim) A liquid crystal display device, comprising:

a liquid crystal display element including:

a pair of substrates; and

a liquid crystal layer sandwiched by the substrates;

a pair of polarizers disposed so as to sandwich the liquid crystal display element; and

at least one phase difference plate disposed between the liquid crystal display element and the pair of polarizers,

wherein the phase difference plate has three principal refractive indices  $n_a$ ,  $n_b$ , and  $n_c$  being mutually related by the inequality  $n_a < n_b < n_c$ , and the principal refractive index  $n_b$  inclines to the normal to a surface of the phase difference plate, and

wherein  $\Delta n(450) - \Delta n(650)$ , i.e., the difference between the refractive index anisotropy  $\Delta n(450)$  of the liquid crystal material for rays of light having the wavelength of 450 nm and the refractive index anisotropy  $\Delta n(650)$  thereof for rays of light having the wavelength of 650 nm, is specified to be not less than 0.0070 and not more than 0.0250.

32. (New Claim) The liquid crystal display device as defined in claim 31,

wherein the refractive index anisotropy  $\Delta n(550)$  of the liquid crystal material for rays of light having the wavelength of 550 nm is specified to be more than 0.060 and less than 0.120.

33. (New Claim) The liquid crystal display device as defined in claim 31,

wherein the refractive index anisotropy  $\Delta n(550)$  is specified to be not less than 0.065 and not more than 0.115.

34. (New Claim) The liquid crystal display device as defined in claim 31,  
wherein the refractive index anisotropy  $\Delta n$  (550) is specified to be not less  
than 0.070 and not more than 0.095.
35. (New Claim) The liquid crystal display device as defined in claim 31,  
wherein  $\Delta n$  (450) -  $\Delta n$  (650) is specified to be not less than 0.0200 and  
not more than 0.0250.
36. (New Claim) The liquid crystal display device as defined in claim 32,  
wherein the refractive index anisotropy  $\Delta n$  (550) of the liquid crystal  
material for rays of light having the wavelength of 550 nm is specified to  
be not less than 0.065 and smaller than 0.115.
37. (New Claim) The liquid crystal display device as defined in claim 36,  
wherein the refractive index anisotropy  $\Delta n$  (550) is specified to be not less  
than 0.070 and not more than 0.095.

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38. (New Claim) A liquid crystal display device, comprising:

a liquid crystal display element including:

a pair of substrates; and

a liquid crystal layer sandwiched by the substrates;

a pair of polarizers disposed so as to sandwich the liquid crystal display element; and

at least one phase difference plate disposed between the liquid crystal display element and the pair of polarizers,

wherein the phase difference plate has three principal refractive indices  $n_a$ ,  $n_b$  and  $n_c$  being such that  $n_a = n_c > n_b$ , and the principal refractive indices  $n_a$  and  $n_c$  being parallel to the surface of the phase difference plate, the principal refractive index  $n_b$  being parallel to the normal to the surface, and

wherein  $\Delta n(450) - \Delta n(650)$ , i.e., the difference between the refractive index anisotropy  $\Delta n(450)$  of the liquid crystal material for rays of light having the wavelength of 450 nm and the refractive index anisotropy  $\Delta n(650)$  thereof for rays of light having the wavelength of 650 nm, is specified to be not less than 0 and less than 0.0090.

39. (New Claim) The liquid crystal display device as defined in claim 38,

wherein  $(n_a - n_b) \times d$ , i.e. the product of the difference between the principal refractive indices  $n_a$  and  $n_b$  multiplied by the thickness  $d$  of the phase difference plate, is specified to be in a range from 80 nm to 250 nm.

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40. (New Claim) The liquid crystal display device as defined in claim 38,  
wherein the refractive index anisotropy  $\Delta n(550)$  of the liquid crystal  
material in the liquid crystal layer for rays of light having the wavelength  
of 550 nm is specified to be more than 0.060 and less than 0.120.
41. (New Claim) The liquid crystal display device as defined in claim 40,  
wherein the refractive index anisotropy  $\Delta n(550)$  is specified to be not less  
than 0.065 and not more than 0.115.
42. (New Claim) The liquid crystal display device as defined in claim 41,  
wherein the refractive index anisotropy  $\Delta n(550)$  is specified to be not less  
than 0.070 and not more than 0.095.
43. (New Claim) The liquid crystal display device as defined in claim 42,  
wherein  $(n_a - n_b) \times d$ , i.e. the product of the difference between the  
principal refractive indices  $n_a$  and  $n_b$  multiplied by the thickness  $d$  of the  
phase difference plate, is specified to be in a range from 80 nm to 250  
nm.
44. (New Claim) The liquid crystal display device as defined in claim 38,  
wherein  $\Delta n(450) - \Delta n(650)$  is specified to be not less than 0 and not more  
than 0.0045.